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COOPERATIVE ECONOMIC INSECT REPORT

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SMALL-GRAIN INSECT CONDITIONS IN TEXAS, OKLAHOMA, AND KANSAS, AUGUST TO NOVEMBER, 1951[1]

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Temperature and precipitation during the summer of 1951 over most of the wheat-growing area of Texas, Oklahoma, and Kansas were not conducive to the growth of volunteer grain. However, heavy rains during June and July in central Kansas caused volunteer growth in this area. Precipitation was rather general over most of the wheat-growing area during the first week of September, but the rains early in September were followed by 6 weeks of dry weather except in central Oklahoma and central Kansas. General precipitation in the form of rain or snow occurred over most of the area from October 25 to November 2. Many farmers who did not plant small grains during the first two weeks in September waited until November to plant; however, some grain was "dusted in" in dry soil. Some fields in western Kansas, western Oklahoma, and the Texas Panhandle have very uneven stands owing to dry conditions when the seed was planted. This general summary of weather conditions has been included to help explain certain insect conditions.

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[1] Bureau of Entomology and Plant Quarantine and Agricultural Experiment Stations of Kansas, Oklahoma, and Texas, cooperating. Information supplied by J. M. King, Entomologist, Texas Agricultural Experiment Station; F. Dines, Wheat Marketing Specialist, Texas Extension Service; R. H. Painter and E. W. Tilton, Entomologists, Kansas Agricultural Experiment Station; R. G. Dahms, H. L. Chada, C. F. Henderson, and W. O. Ridgeway, Bureau of Entomology and Plant Quarantine, and E. A. Wood, Bureau of Entomology and Plant Quarantine and Oklahoma Agricultural Experiment Station.

Greenbugs (Toxoptera graminum)--A survey was made throughout the small-grain-growing area of Texas in July and August. Greenbugs were found on volunteer grain near an irrigation ditch in two fields near Hereford, Deaf Smith County, on August 24 and on volunteer wheat in Floyd and Motley Counties on August 28 and 29. A survey was made in the Texas Panhandle, October 29 to November 2. Greenbugs were found in only 5 of the 24 fields examined, one field near Electra, Wichita County, on the Chillicothe Experiment Station, Hardeman County, two fields near Pampa, Gray County, and one near Friona, Parmer County. The only active colony found was on one leaf at the Chillicothe Experiment Station.

Oklahoma--Greenbugs were found on volunteer oats in Pawnee County on October 5, in an early-drilled wheat field in Kay County October 19, and in two fields in Caddo County on October 29. On November 13, two fields near Fairfax, Osage County, were found to be uniformly infested, averaging about 10 bugs per linear foot of drill row. No greenbugs were found in Tillman, Kiowa, Washita, Custer, Blaine, Major, Dewey, Woodward, Harper, Cotton, Comanche, Oklahoma, Canadian, Kingfisher, and Logan Counties in a survey October 12 to November 1.

Kansas--Greenbugs were reported in the vicinity of Manhattan, Riley County, early in September; and they became sufficiently abundant in October to cause some damage. Greenbugs were found near Claflin, Barton County, September 25 and in Clay County (undated). A survey was made in western Kansas October 25-27 and greenbugs were found in Graham, Sheridan, Thomas, and Wichita Counties. Greenbugs were found in two fields in Cowley County on October 19 and in several fields in Marion, Dickinson, and Geary Counties on November 7.

Corn leaf aphid (Aphis maidis) was found in small numbers on early-seeded wheat throughout the tri-state area, especially where sorghum was growing.

Crown aphid (Rhopalosiphum subterraneum) was found on September 23 in the Garden City district of Kansas. This aphid was found in each of 44 fields examined in western Kansas on the survey, October 25-27. It was not found in Texas or Oklahoma.

Two-spotted spider mite (Tetranychus bimaculatus) and brown wheat mite (Petrobia latens) were found in Kansas in a few volunteer fields in Sherman County and north of Garden City, October 25-27. A few unidentified mites were found in one field in Harper County, Okla., October 16.

Leafhoppers including Endria inimica were collected in numbers on volunteer grain in Trego, Gove, and Thomas Counties in western Kansas, October 25-27. Unidentified leafhoppers were found in several fields in the Texas Panhandle, October 29-31, and also in western Oklahoma.

Flea beetles (Chaetocnema sp., probably pulicaria) were reported from western Kansas during the week of September 24 and during September and October were reported from Greeley, Stanton, Haskell, Gray, and Meade Counties, where damage was occurring. They were found in several counties in western Oklahoma in October, but no serious damage occurred. Injury in the Texas Panhandle was reported late in October, and serious injury occurred in some fields near Pampa, Gray County. The most serious damage appeared to be in fields adjoining old lake beds. The insects had worked out in a fan-shaped pattern from these beds, often apparently killing 30 or 40 acres of a field. Some precipitation occurred during the week of October 22 and by October 30 there was some indication that the infested area was reviving.

Lesser cornstalk borer (Elasmopalpus lignosellus) was reported doing serious damage to wheat in some districts of Oklahoma early in October. A survey in west-central Oklahoma, October 12-18, revealed some injury in Kiowa, Washita, Blaine, Custer, Major, Dewey, and Woodward Counties. The most serious injury appeared to be on sandy upland soil in Washita, Custer, Blaine, and Major Counties, where larvae had bored through the wheat stem beginning at the crown and working up almost to the surface of the soil. Young plants were killed, but in older plants sometimes only one tiller was killed. Often there were several plants in one drill row dead indicating that one larvae may kill several plants. The injury was similar to that caused by white grubs, except the stem and leaves were not entirely cut off from the roots. Larvae were not seen after October 15.

Wireworms and false wireworms were found in several fields in western Oklahoma during October and were particularly abundant in Custer and Blaine Counties.

White grubs (unidentified) were rather abundant in several fields in Tillman County, Okla., on October 12.

Grasshoppers (Melanoplus mexicanus) damage to wheat margins was general and rather severe in several counties in western Kansas during September and early in October.

Hessian fly (*Phytophaga destructor*) was present in volunteer wheat and a few very early-planted fields in Ellis, Trego, Graham, Sheridan, Thomas, Sherman, Wallace, Greeley, Wichita, Scott, eastern Hodgemen, Pawnee, and Rush Counties, Kans., as found during the survey October 25-27.